

FEB 14 2006

Serial No. 10/080,977

Page 5 of 18

a third base station device provided in a third wireless communications area, which is adjacent to the first and second wireless communications areas and to which the first and second frequencies are allocated;

a first base station controller controlling said first base station device using the first and second frequencies and controlling communications conducted by said third first base station device using the first frequency but not controlling communications conducted by and said third base station device using the second frequency; and

a second base station controller controlling said second base station device using the first and second frequencies and controlling communications conducted by said third second base station device using the second frequency but not controlling communications conducted by and said third base station device using the first frequency, wherein

each of said first, second and third base station devices can use both of the first and second frequencies to communicate with a mobile station,

said first base station controller controls communications conducted by said first base station device using the first frequency and the second frequency and controls communications conducted by said third base station device using the first frequency but does not control communications conducted by said third base station device using the second frequency.

said second base station controller controls communications conducted by said second base station device using the first frequency and the second frequency and controls communications conducted by said third base station device using the second frequency but does not control communications conducted by said third base station device using the first frequency,
and

84110614_1

Serial No. 10/080,977

Page 6 of 18

said first base station controller allocates the same frequency to a radio channel between a mobile station and a corresponding base station device before and after the mobile station travels from the first wireless communications area to the third wireless communications area in a case where the mobile station has used the first frequency in the first wireless communications area, and allocates the first frequency to the radio channel after the mobile station travels from the third wireless communications area to the first wireless communications area.

9. (original) The mobile communications system according to claim 8, wherein when a mobile station using the first frequency in the first wireless communications area moves from the first wireless communications area to the third wireless communications area, said third base station device communicates with the mobile station using the first frequency.

10. (original) The mobile communications system according to claim 8, wherein when a mobile station using the first frequency in the third wireless communications area moves from the third wireless communications area to the first wireless communications area, said first base station device communicates with the mobile station using the first frequency.

11. (currently amended) A mobile communications system, comprising:

a first base station device provided in a first wireless communications area to which at least a first frequency is allocated;

a second base station device provided in a second wireless communications area to which at least a second frequency is allocated;

84110614_1

Serial No. 10/080,977

Page 7 of 18

a third base station device provided in a third wireless communications area, which is adjacent to the first and second wireless communications areas and to which the first and second frequencies are allocated for same multiple access scheme, wherein said third base station device is accommodated in different controllers for each allocated frequency;

a first base station controller controlling communications conducted by said first base station device and said third base station device; and

a second base station controller controlling communications conducted by said second base station device and said third base station device, wherein

each of said first, second and third base station devices can use both of the first and second frequencies to communicate with a mobile station,

said first base station controller controls communications conducted by said first base station device using the first frequency and the second frequency and controls communications conducted by said third base station device using the first frequency but does not control communications conducted by said third base station device using the second frequency,

said second base station controller controls communications conducted by said second base station device using the first frequency and the second frequency and controls communications conducted by said third base station device using the second frequency but does not control communications conducted by said third base station device using the first frequency,
and

said first base station controller allocates the same frequency to a radio channel between a mobile station and a corresponding base station device before and after the mobile station travels from the first wireless communications area to the third wireless communications area in a case where the mobile station has used the first frequency in the first wireless communications area.

84110614_1

Serial No. 10/080,977
Page 8 of 18

and allocates the first frequency to the radio channel after the mobile station travels from the third wireless communications area to the first wireless communications area.

12. (currently amended) A mobile communications system, comprising:

a first base station conducting wireless communications using at least a first frequency;

a second base station conducting wireless communications using at least a second

frequency different from the first frequency;

a third base station, located adjacent to said first and second base stations, conducting wireless communications using at least the first and second frequencies;

a first base station controller managing at least the first frequency used in said first and third base stations and the second frequency with respect to said first base station, but does not manage the second frequency with respect to [[this]] said third base station; and

a second base station controller managing at least the second frequency used in said second and third base stations and the first frequency with respect to said second base station, but does not manage the first frequency with respect to [[this]] said third base station, wherein each of said first and second base station controllers further comprises controlling means for allocating the same frequency when there is a hand-off between base station devices managed by the corresponding base station controller.

13. (original) The mobile communications system according to claim 12, wherein each of said first and second base station controllers further comprises instructing means for instructing said first base station to use the first frequency when there is a handoff from said third base

Serial No. 10/080,977
Page 9 of 18

station to said first base station, and instructing said second base station to use the second frequency when there is a hand-off from said third base station to said second base station.

14. (withdrawn from consideration) A base station device, located adjacent to a base station using a plurality of frequencies, that shares at least one of the plurality of frequencies, comprising controlling means for performing a soft hand-off process if there is a hand-off from this base station to the adjacent base station when the shared frequency is used, and performing a hard hand-off process between cells using the shared frequency if there is a hand-off from adjacent base station to this base station when a frequency other than the shared frequency is used in the adjacent base station.

15. (withdrawn from consideration) A base station that is adjacent to at least first and second base stations, comprising:

a wireless unit using a part or all of frequencies used by the first base station as a first shared frequency;

a wireless unit using a part or all of frequencies used by the second base station as a second shared frequency; and

controlling means for performing a soft hand-off using the first shared frequency if there is a hand-off from the first base station to this base station when the first shared frequency is used, performing a soft hand-off using the second shared frequency if there is a hand-off from the second base station to this base station when the second frequency is used, performing a hard hand-off process between cells for switching the frequency from the second shared frequency to the first shared frequency if there is a hand-off from this base station to the first base station

84110614_1

Serial No. 10/080,977
Page 10 of 18

when the second shared frequency is used, and performing a hard handoff process for switching the frequency from the first shared frequency to the shared second frequency if there is a hand-off from this base station to the second base station when the first shared frequency is used.

16. (withdrawn from consideration) A base station controller, connected to a plurality of base stations, for performing a soft hand-off with priority if there is a hand-off between the connected base stations and if communications conducted before and after the hand-off are controlled by this base station controller, comprising controlling means for controlling, for at least one of the plurality of base stations, only communications conducted using a part of frequencies used by the at least one of the plurality of base stations, and allocating one of the part of the frequencies if there is a handoff when a mobile station using a frequency that is not controlled by this base station controller in the at least one of the plurality of base stations moves to an area controlled by another base station to which this base station controller is connected.

17. (withdrawn from consideration) A base station device, that is used in a mobile communications system including a first base station device provided in a first wireless communications area to which at least a first frequency is allocated, a second base station device provided in a second wireless communications area to which at least a second frequency is allocated, a first controller accommodating the first base station device and a second controller accommodating the second base station device, and that is provided in a third wireless communications area which is adjacent to the first and second wireless communications areas and to which the first and second frequencies are allocated, wherein

84110614_1

Serial No. 10/080,977

Page 11 of 18

data are transmitted to and received from a mobile station using the first frequency under the control of the first controller which manages the first frequency but does not manage the second frequency with respect to this base station; and

data are transmitted to and received from a mobile station using the second frequency under the control of the second controller which manages the second frequency but does not manage the first frequency with respect to this base station.

18. (withdrawn from consideration) A base station device, used in a mobile communications system comprising a first base station device provided in a first wireless communications area to which at least a first frequency is allocated, a second base station device provided in a second wireless communications area to which at least a second frequency is allocated and a third base station device provided in a third wireless communications area which is adjacent to the first and second wireless communications areas and to which the first and second frequencies are allocated, that accommodates at least second and third base station devices, comprising:

a base station management table for registering base station devices to be controlled for each frequency allocated to corresponding wireless communications area; and

controlling means for controlling the second and third base stations based on information registered in said base station management table.

19. (currently amended) A communications control method in a mobile communications system including a first base station device provided in a first wireless communications area to which at least a first frequency is allocated, a second base station device

84110614_1

Serial No. 10/080,977

Page 12 of 18

provided in a second wireless communications area to which at least a second frequency is allocated, a third base station device provided in a third wireless communications area which is adjacent to the first and second wireless communications areas and to which the first and second frequencies are allocated, a first base station controller controlling the first base station device using the first frequency and a second base station controller controlling the second base station device using the second frequency frequency, wherein

the first base station controller controls communications conducted by the first base station device using the first frequency and the second frequency and controls communications conducted by the third base station device using the first frequency but not controlling communications conducted by said third base station device using the second frequency; and,

the second base station controller controls communications conducted by the second base station device using the first frequency and the second frequency and controls the communications conducted by the third base station device using the second frequency but not controlling communications conducted by said third base station using the first frequency, and

said first base station controller allocates the same frequency to a radio channel between a mobile station and a corresponding base station device before and after the mobile station travels from the first wireless communications area to the third wireless communications area in a case where the mobile station has used the first frequency in the first wireless communications area, and allocates the first frequency to the radio channel after the mobile station travels from the third wireless communications area to the first wireless communications area.

84110614_1